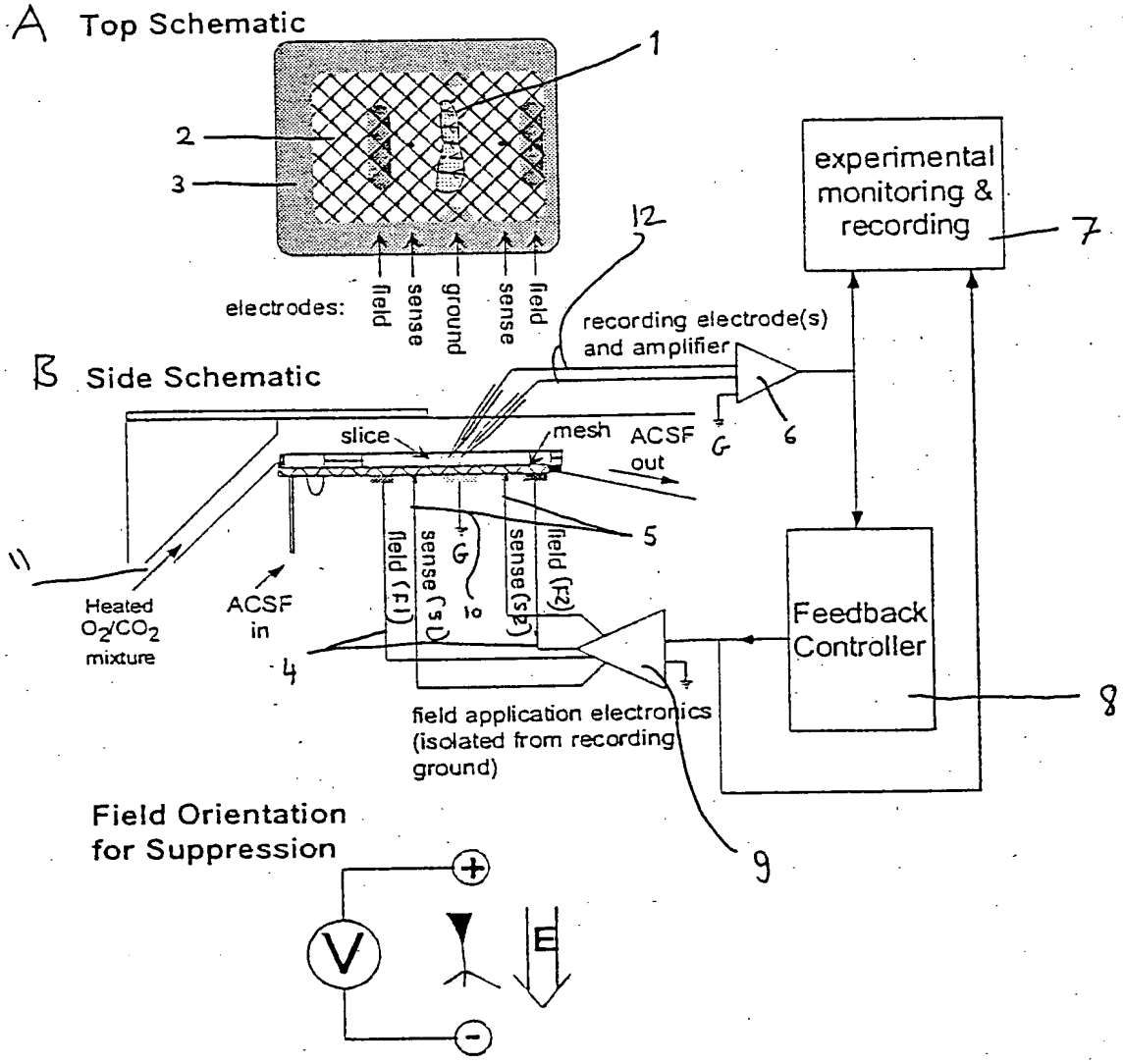

A Top Schematic
1
2
3
electrodes:
field
sense
ground
sense
field
12
recording electrode(s)
and amplifier
experimental
monitoring &
recording
7
B Side Schematic
slice
mesh
ACSF
out
G
6
5
11
Heated
O_2/CO_2
mixture
ACSF
in
field (F1)
sense (S1)
G
10
sense (S2)
field (F2)
4
Feedback
Controller
8
field application electronics
(isolated from recording
ground)
9
Field Orientation
for Suppression
+
V
E
-

Figure 1

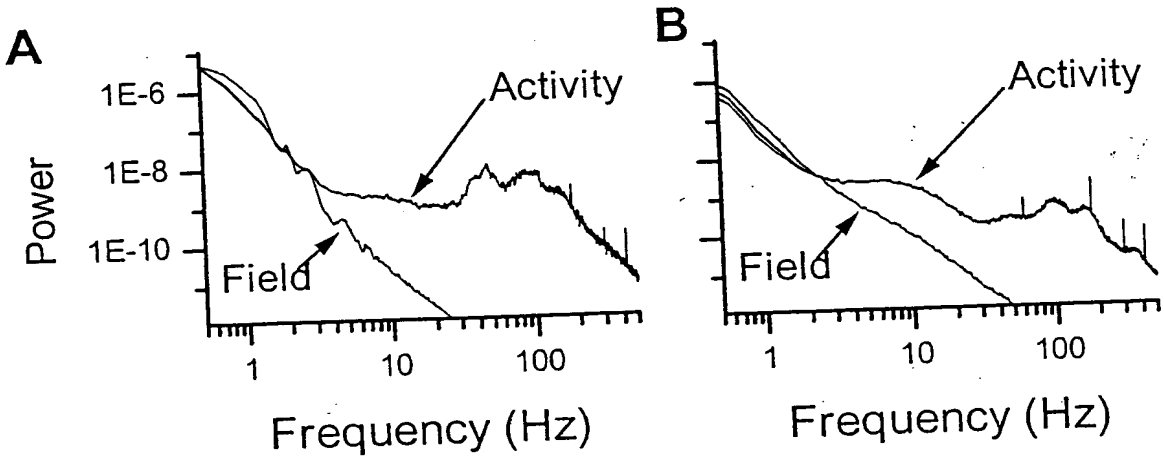

A
B
Power
1E-6
1E-8
1E-10
Activity
Field
1
10
100
Frequency (Hz)
Activity
Field
1
10
100
Frequency (Hz)

Figure 2

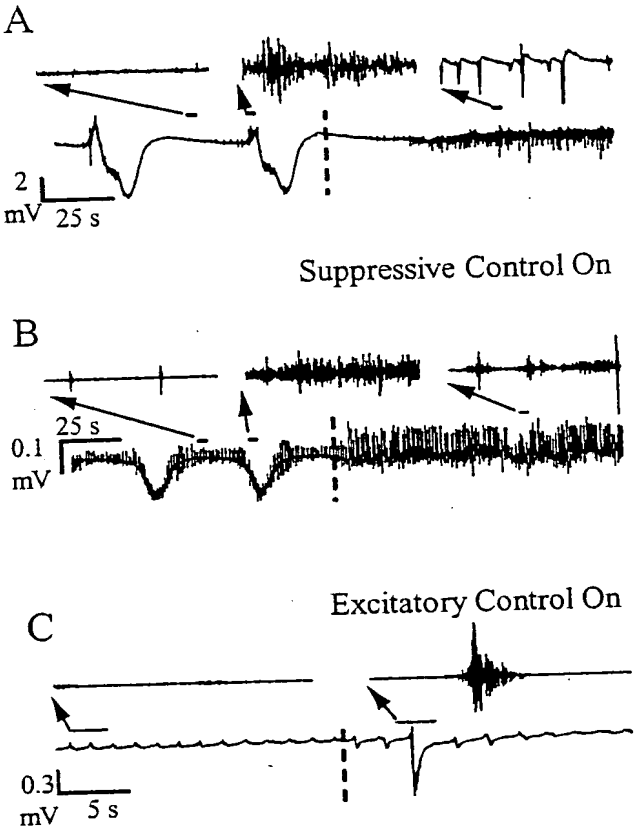
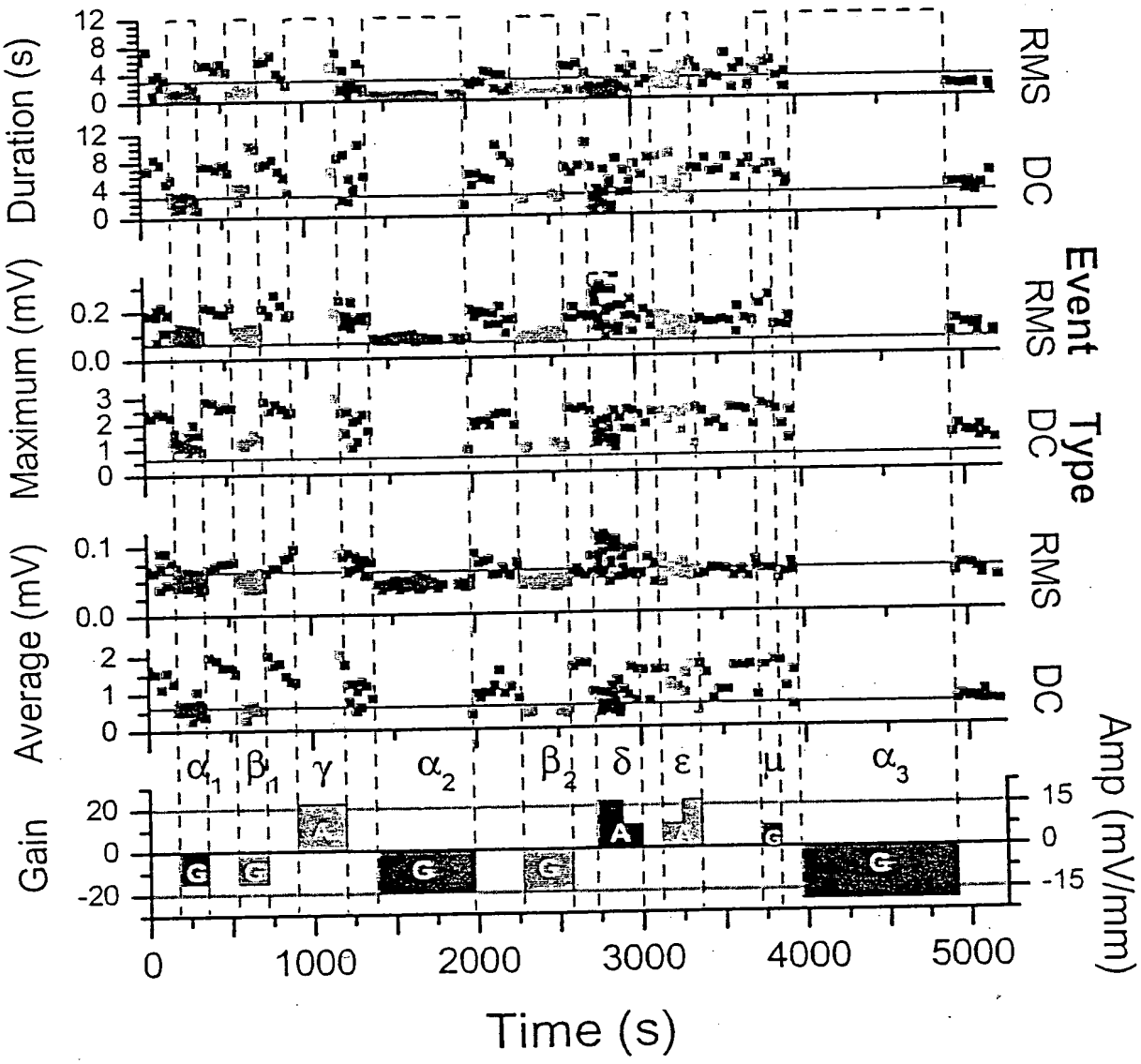

A
2
mV
25 s
Suppressive Control On
B
25 s
0.1
mV
Excitatory Control On
C
0.3
mV
5 s

Figure 3

Figure 4


Duration (s)
Maximum (mV)
Average (mV)
Gain
Event Type
RMS
DC
RMS
DC
RMS
DC
Amp (mV/mm)
α1 β1 γ α2 β2 δ ε μ α3
Time (s)
0
1000
2000
3000
4000
5000

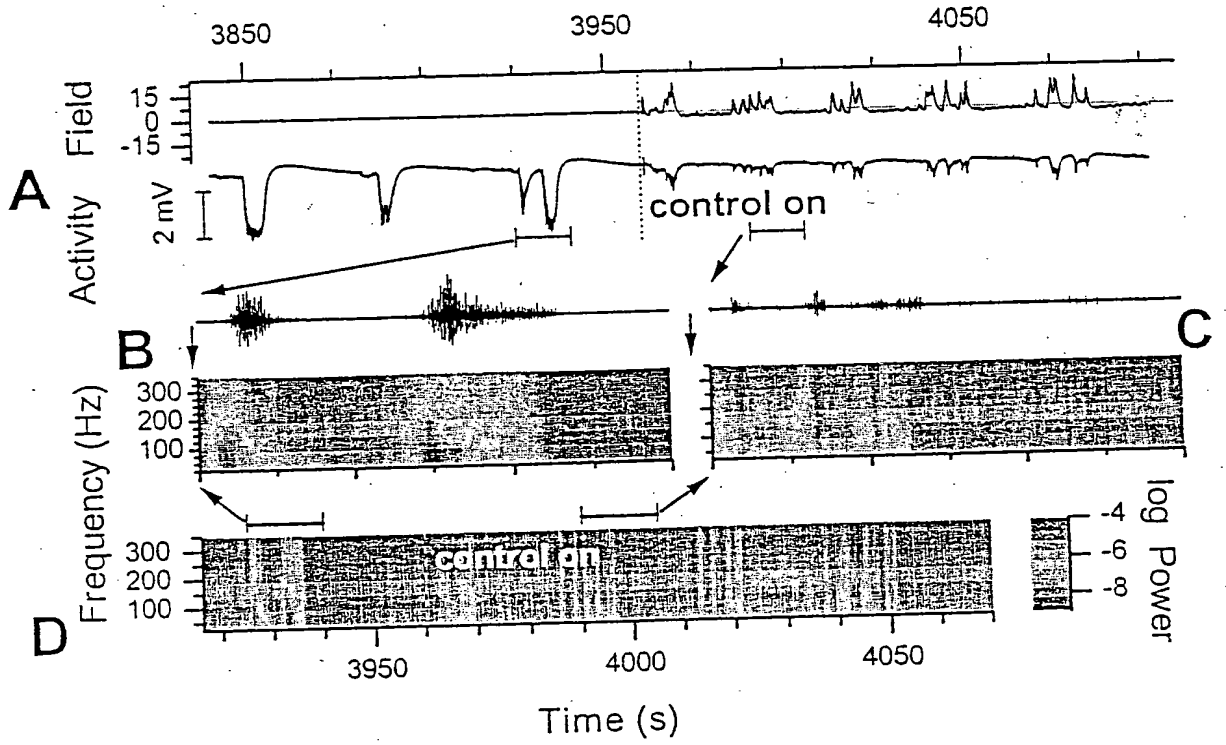

3850
3950
4050
A
Field
15
0
-15
Activity
2 mV
control on
B
C
300
200
100
Frequency (Hz)
D
control on
-4
-6
-8
log Power
3950
4000
4050
Time (s)

Figure 5

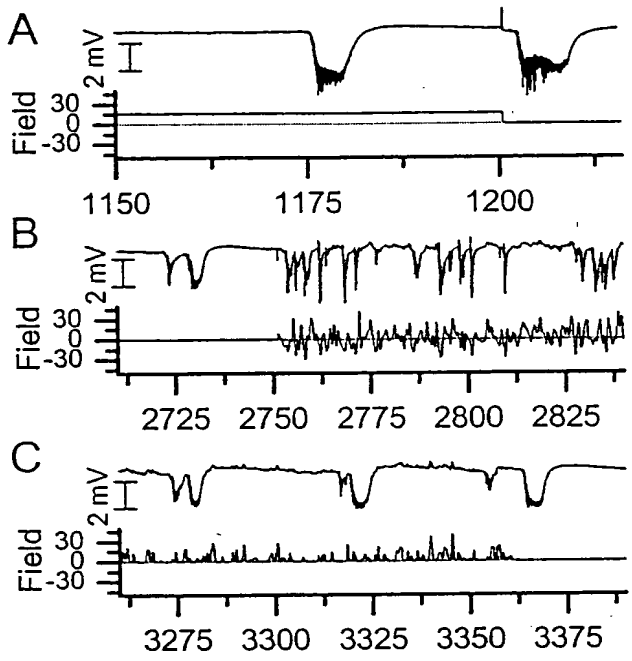

A
2 mV
Field
30
0
-30
1150
1175
1200
B
2 mV
Field
30
0
-30
2725
2750
2775
2800
2825
C
2 mV
Field
30
0
-30
3275
3300
3325
3350
3375

Figure 6

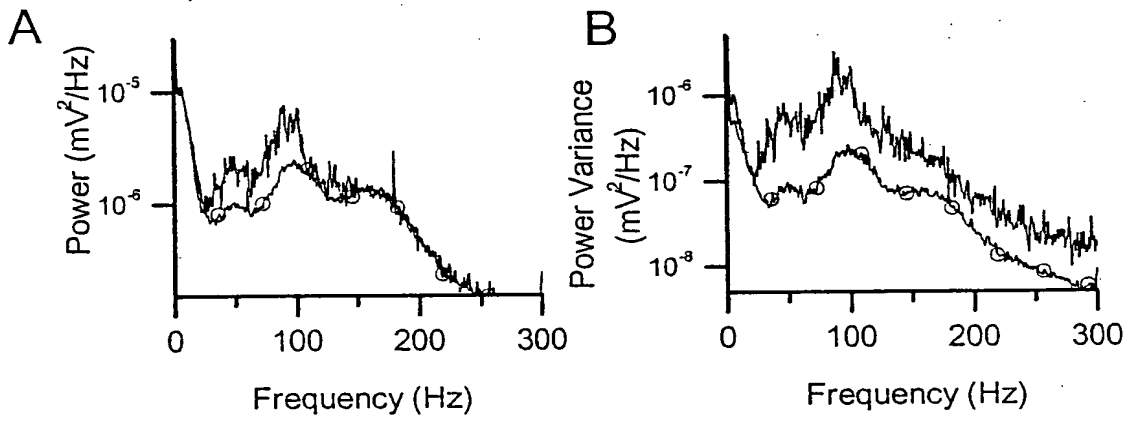

A
Power (mV²/Hz)
10⁻⁵
10⁻⁶
0
100
200
300
Frequency (Hz)
B
Power Variance (mV²/Hz)
10⁻⁶
10⁻⁷
10⁻⁸
0
100
200
300
Frequency (Hz)

Figure 7

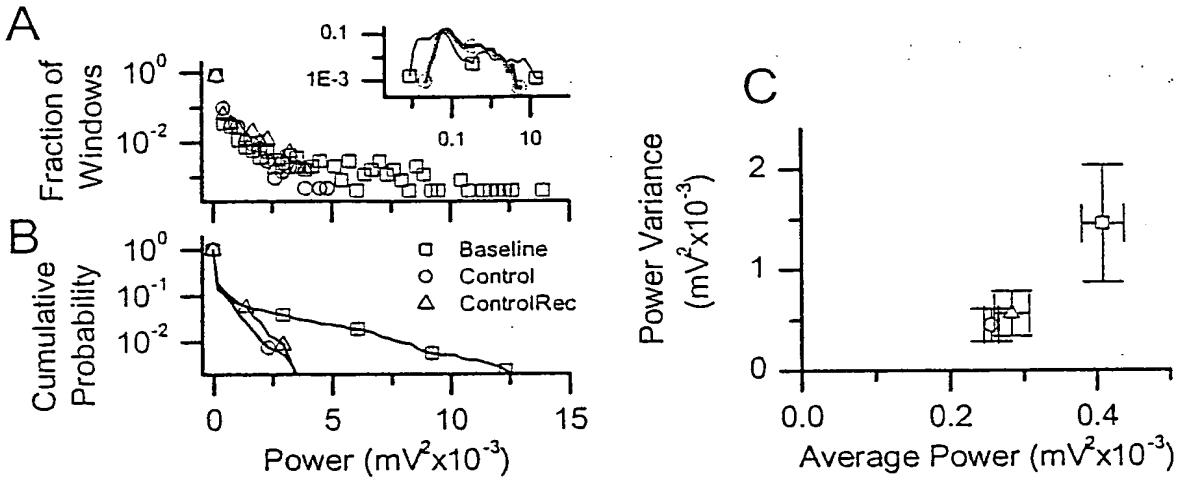

A
Fraction of Windows
10^0
10^{-2}
0.1
1E-3
0.1
10
B
Cumulative Probability
10^0
10^{-1}
10^{-2}
Baseline
Control
ControlRec
0
5
10
15
Power (mV^2x10^{-3})
C
Power Variance (mV^2x10^{-3})
2
1
0
0.0
0.2
0.4
Average Power (mV^2x10^{-3})

Figure 8

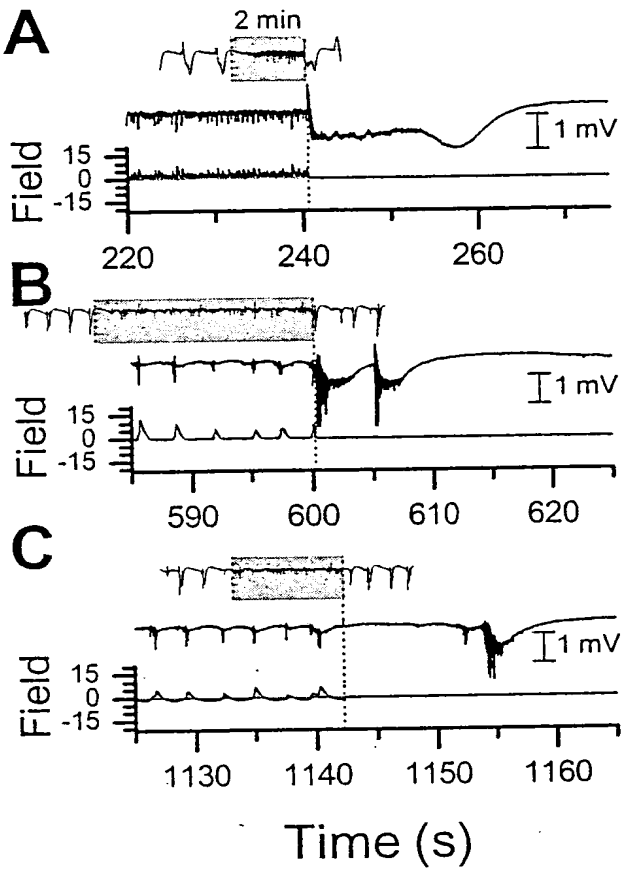

A
2 min
1 mV
Field
15
0
-15
220
240
260
B
1 mV
Field
15
0
-15
590
600
610
620
C
1 mV
Field
15
0
-15
1130
1140
1150
1160
Time (s)

Figure 9